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OBSERVATIONS IN HAMBLEDON VINEYARD 1972

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In an attempt to identify a possible meteorological advantage of the Hambledon vineyard over nearby standard stations, observations of temperature, rainfall, sunshine and run of wind were made at Hambledon for comparison with data from Southampton, Fernhurst and Martyr Worthy.

Basic site differences are mainly in terms of height above sea level, distance from the south coast and shelter although the Hambledon site was on a slight slope of about 6° down north to south.

Site	N.G.R.	Approximate height amsl	Approximate distance from coast
Southampton	SU 419119	10 feet	-
Fernhurst	SU 906274	190 "	20 miles
Martyr Worthy	SU 516338	275 "	20 "
Hambledon	SU 648157	300 "	10 "

Southampton is an urban site, more or less on the waterfront; Fernhurst is a fairly sheltered horticultural (orchard) site; Martyr Worthy is open and exposed near the top of south facing slopes; Hambledon with similar aspect and height to Martyr Worthy, is rather sheltered by trees and hedges but is nevertheless fairly exposed to winds from all directions except north and northeast.

The plotted differences between stations for weekly means of maximum and minimum temperatures show:-

i. The minimum temperature at Hambeldon is generally about 1° to 2°C lower than at Southampton as would be expected from the coastal effect.

ii. Maximum temperatures at Hambledon are generally higher than at Southampton during the summer period (June to August) but lower during early and late season.

iii. Both maximum and minimum temperatures at Hambledon were generally higher than at Martyr Worthy or Fernhurst despite the lower and more sheltered situation at Fernhurst.

Over the whole period the average differences between the sites were:-

	Maximum		Minimum		Mean	
	Mean	SD	Mean	SD	Mean	SD
Hambledon -						
Southampton	-0.27	0.97	-1.78	0.94	-1.03	0.67
Fernhurst	0.16	0.83	0.45	1.45	0.29	0.79
Martyr Worthy	0.27	0.80	0.06	0.87	0.14	0.67

The variations in daily or weekly differences between the sites may well be due as much to the variable penetration of sea breezes and coastal effects as to real differences in the climatology of the sites.

The accumulated temperatures above 10°C over the growing season were:-

	1972	1961-70 Average
Southampton	705	882
Fernhurst	472	666
Martyr Worthy	510	-
Hambledon	546	-

Assuming that 1972 totals are some 25 to 30 per cent of the average, the Hambledon average as measured on a slight slope (less than the general 6° to 8° slope of the vineyard) and over grass rather than bare soil, would be around 770 degree days. This is still well below the required figure of 1,000 degree days so the success of the Hambledon venture may probably owe as much to the energy and enthusiasm of the owner and his staff as to the added temperature advantage of slope and bare soil.

Rainfall amounts showed no hint of a systematic variation as compared with the other sites and the partly shaded exposure of the sunshine recorder at Hambledon doesn't allow for valid comparisons to be made.

It appears from the temperature data that Hambledon might enjoy some slight temperature advantage over nearby standard stations but the comparisons are too variable to permit any definite suggestion of a real and lasting advantage or to quantify such an advantage.

1972 was undoubtedly a disastrous year for viticulture in southern England - the Hambledon yield will be somewhat less than 1,000 bottles compared with an average of about 8,000 bottles - and this single year's data may at least suggest the probable effect on English viticulture of cooler summers and the economic dangers of trying to establish new vineyards in any but the most favourable situations.

I am indebted to Sir Guy Salisbury-Jones for permission to take these observations in the vineyard and to Mr W Carcary for actually making the daily observations.

Meteorological Office
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WEEKLY TEMPERATURE DIFFERENCES

—·— MAXIMUM ·---· MINIMUM